Product range of dialysis disposables

Medical Devices and Medicinal Products

Reliability only a systems provider can offer. Optimised therapy with disposables in original B. Braun quality.

B BRAUN
SHARING EXPERTISE

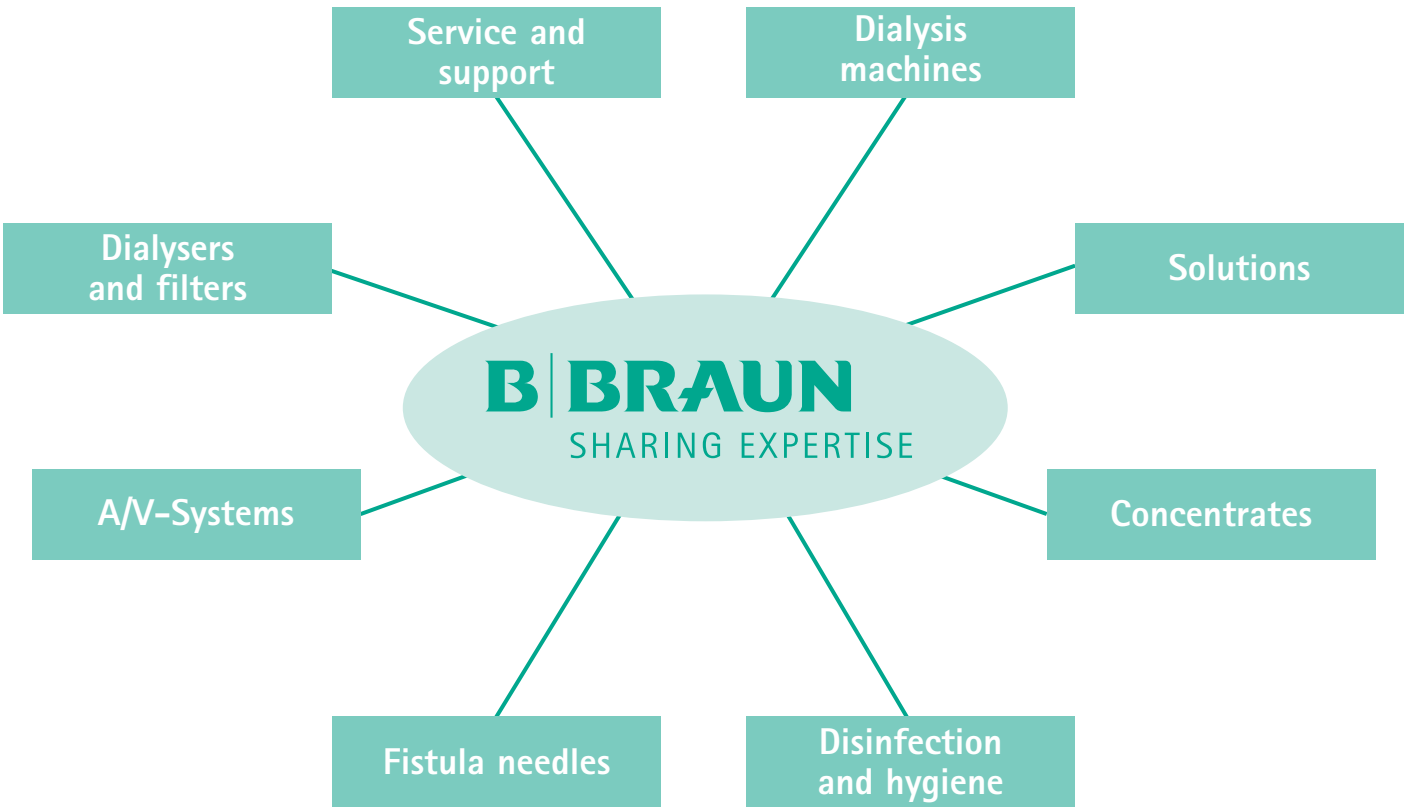
B. Braun, a global systems provider

As a globally active group, we offer you the security of an international presence.

The modular dialysis systems by B. Braun feature all the components you need for comprehensive therapy from one single source, coordinated down to finest detail. You also benefit from B. Braun's dependable, consistently high-level quality.

- Excellent products in dependable original B. Braun quality
- All system components are compatible
- First-class, international logistics network
- Global presence: products, services, and support

Intelligent solutions by B. Braun:
One partner to cover all your extracorporeal blood treatment needs



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Note: The mentioned products may not be registered in your country. Product information as registered in Germany. The product information may differ from country to country. Please contact your local B. Braun partner for further information.

1. Dialysers

1.1 Diacap® α Polysulfone

Diacap® α Polysulfone is the innovative advancement of the well-established Polysulfone dialyser.

The result is the Polysulfone fibre with optimised membrane structure and above-average diffusive and convective transport properties.

Our process engineering expertise and our ongoing commitment to comprehensive quality management ensure consistently high standards.

- Shelf life: 36 months

Product benefits of Diacap® α Polysulfone:

- Excellent biocompatibility
- Minimal leucocyte and platelet reduction
- Validated endotoxin retention and minimal need for anticoagulants
- Efficient elimination of uraemic toxins
- Continuously high performance profile
- Simple and safe handling
- 5 Low and 5 High Flux versions available
- Detachable extra label for 100 % product traceability and medical record keeping

Technical Data
Diacap® α Polysulfone High Flux Dialysers

In vitro performance	HI PS 10	HI PS 12	HI PS 15	HI PS 18	HI PS 20
Ultrafiltration coefficient (ml/h/mmHg)	34	42	50	55	58
Clearances: Q_B = 200ml/min					
Urea	180	186	190	192	194
Creatinine	162	173	178	182	184
Phosphate	160	171	176	180	183
Vitamin B_{12}	100	115	127	137	143
Inulin	76	89	99	109	114
Clearances: Q_B = 300ml/min					
Urea	223	238	245	250	253
Creatinine	195	213	224	228	232
Phosphate	192	210	220	224	229
Vitamin B_{12}	112	131	148	160	168
Inulin	84	97	111	120	127
Clearances: Q_B = 400ml/min					
Urea	250	271	288	292	296
Creatinine	213	239	262	270	275
Phosphate	208	235	259	267	273
Vitamin B_{12}	120	136	160	181	189
Inulin	90	104	120	132	139
Sieving coefficients:					
Inulin	1				
β_2-microglobulin	0.8				
Albumin	0.005				
Surface (m^2)	1.0	1.2	1.5	1.8	2.0
Wall thickness/ Internal diameter (µm)	40/200				
Priming volume (ml) bloodside	58	68	90	110	121
Membrane material	High Flux α Polysulfone				
Housing material	Polycarbonate				
Potting compound	Polyurethane				
Sterilisation	Gamma				
Units per box	20				
Art. No.	7203622	7203630	7203649	7203657	7203665

In vitro performance and physical data comply with EN 1283
(Clearances: Q_D = 500 ml/min, Q_F = 0 ml/min; UF coefficient: human blood, Hct 32%, total protein 6%, T = 37°C; Sieving coefficients: Q_B = 300 ml/min, Q_F = 60 ml/min)

Subject to modifications

Technical Data
Diacap® α Polysulfone Low Flux Dialysers

In vitro performance	LO PS 10	LO PS 12	LO PS 15	LO PS 18	LO PS 20
Ultrafiltration coefficient (ml/h/mmHg)	6.8	7.9	9.8	12.3	13.7
Clearances: Q_B = 200ml/min					
Urea	176	183	189	192	194
Creatinine	157	166	173	180	183
Phosphate	126	139	146	157	164
Vitamin B_{12}	68	77	83	100	110
Clearances: Q_B = 300ml/min					
Urea	217	233	246	253	258
Creatinine	181	200	213	225	234
Phosphate	147	162	172	188	198
Vitamin B_{12}	73	82	91	112	125
Clearances: Q_B = 400ml/min					
Urea	242	261	285	294	302
Creatinine	198	220	239	256	264
Phosphate	159	175	190	207	220
Vitamin B_{12}	75	86	95	123	136
Surface (m^2)	1.0	1.2	1.5	1.8	2.0
Wall thickness/ Internal diameter (µm)	40/200				
Priming volume (ml) bloodside	58	68	90	110	121
Membrane material	Low Flux α Polysulfone				
Housing material	Polycarbonate				
Potting compound	Polyurethane				
Sterilisation	Gamma				
Units per box	20				
Art. No.	7203525	7203533	7203541	7203550	7203568

In vitro performance and physical data comply with EN 1283
(Clearances: Q_D = 500 ml/min, Q_F = 0 ml/min; UF coefficient: human blood, Hct 32%, total protein 6%, T = 37°C)

Subject to modifications

1.2 Diacap® α Polysulfone^{+} HiFlo

The new HiFlo series with the α Polysulfone^{+} membrane is based on a further optimised membrane structure which gets still closer to the profile of the human kidney and allows a highly efficient and safe dialysis.

- Shelf life: 36 months

Diacap® α Polysulfone^{+} HiFlo:

- MODIFIED POLYSULFONE membrane technology: Even closer to the profile of the human kidney
- Excellent balance between high $ß_2$m-elimination and minimal albumin loss
- Outstanding phosphate clearance
- Efficient elimination of a wide spectrum of uraemic toxins
- Also ideal for high-volume haemodiafiltration therapies
- Unchanged high biocompatibility and optimal endotoxin retention
- Detachable extra label for 100 % product traceability and medical record keeping

Technical Data: Diacap® α Polysulfone^{+} HiFlo

In vitro performance	HiFlo 18	HiFlo 23
Ultrafiltration coefficient (ml/h/mmHg)	78	92
Clearances: Q_B = 400 ml/min Q_F = 100 ml/min		
Urea	354	360
Creatinine	328	342
Phosphate	333	346
Vitamin B_{12}	250	261
Inulin	190	210
Clearances: Q_B = 300ml/min Q_F = 75 ml/min		
Urea	283	289
Creatinine	265	276
Phosphate	270	283
Vitamin B_{12}	210	220
Inulin	165	180
Clearances: Q_B = 400ml/min Q_F = 0 ml/min		
Urea	298	328
Creatinine	279	302
Phosphate	283	304
Vitamin B_{12}	177	199
Inulin	116	133
Clearances: Q_B = 300ml/min Q_F = 0 ml/min		
Urea	257	277
Creatinine	245	260
Phosphate	246	262
Vitamin B_{12}	164	184
Inulin	110	126
Sieving coefficients:		
Inulin	1	
$β_2$-microglobulin	0.8	
Albumin	0.005	
Surface (m^2)	1.8	2.3
Wall thickness/Internal diameter (µm)	38/195	
Priming volume (ml) bloodside	100	120
Membrane material	α Polysulfone^{+}	
Housing material	Polycarbonate	
Potting compound	Polyurethane	
Sterilisation	Gamma	
Units per box	20	
Art. No.	7203673	7203681

In vitro performance and physical data comply with EN 1283; **UF coefficient:** ANSI/AAMI RD16, bovine blood, Hct 32%, total protein 6%, T = 37°C; **Clearances:** Q_D = 500 ml/min; **Sieving coefficients:** Q_B = 300 ml/min, Q_F = 60 ml/min);

Subject to modifications

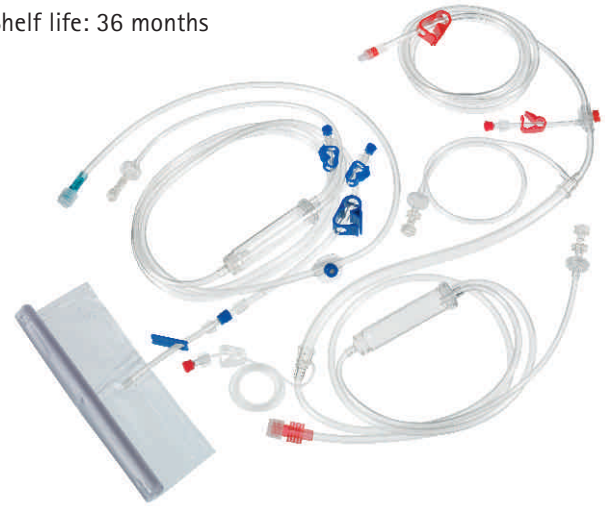
2. A/V Systems
Haemodialysis bloodline systems

Under the product group name "A/V Systems" we offer A/V sets and accessory parts such as infusion and tubing systems, connectors and adapters for all conventional dialysis machines.

B. Braun has integrated its bloodline system sets for Dialog, Dialog Advanced and Dialog$^+$ into a state-of-the art dialysis system where machine and accessories are perfectly co-ordinated and offer patients an ideal extracorporeal treatment.

In addition to the A/V-sets for double-needle therapy, B. Braun also supplies systems for standard single-needle dialysis and its own in-house developed single-needle cross-over method for highly efficient single-needle dialysis.

- Shelf life: 36 months



Product benefits of A/V-sets:

Handling

- Colour coded components
- On-off clamps
- Easy handling

Quality

- Manufactured with many years of experience

Safety

- Injection port with large finger protections and latex free for added user safety

Accessories

- Extensive range of accessories offered, customised version available on request

A/V Systems for Dialysis machines of B. Braun

Art. No.	Product name	Short description	Features
7036604	**A/V-Set Dialog**	Bloodline system for double-needle treatment, suitable for Dialog, Dialog Advanced, Dialog$^+$	■ Arterial pre-filter chamber + PBE port ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ Post-dilution ■ Sterilisation by radiation
7210713	**A/V-Set Dialog**	Bloodline system for double-needle treatment, suitable for Dialog, Dialog Advanced, Dialog$^+$	■ Arterial pre-filter chamber + PBE port ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ One way spike ■ Post-dilution ■ Sterilisation by radiation
7210684	**A/V-Set Dialog**	Bloodline system for double-needle treatment, suitable for Dialog, Dialog Advanced, Dialog$^+$	■ Arterial pre-filter chamber + PBE port ■ Double transducer protector ■ Colour coded patient clamp ■ 3L drain bag ■ Arterial latex-free asymmetrical injection side ■ One way spike ■ Post-dilution ■ Sterilisation by radiation

A/V Systems for Dialysis machines of B. Braun

Art. No.	Product name	Short description	Features
7210588	**A/V-Set Dialog**	Bloodline system for double-needle treatment, suitable for Dialog, Dialog Advanced, Dialog+	■ Arterial pre-filter chamber + PBE port ■ DEHP-free blood tubes transportation ■ Colour coded patient clamp ■ 3L drain bag ■ Arterial latex-free asymmetrical injection side ■ One way spike ■ pre/post-dilution ■ Sterilisation by radiation
7210697	**A/V-Set Dialog**	Bloodline system for double-needle treatment, suitable for Dialog, Dialog Advanced, Dialog+	■ Arterial pre-filter chamber + PBE port ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ One way spike ■ pre/post-dilution ■ Infusion set ■ Recirculation connector ■ Sterilisation by radiation
7210785	**A/V-Set Dialog**	Bloodline system for double-needle treatment, suitable for Dialog, Dialog Advanced, Dialog+	■ Arterial pre-filter chamber + PBE port ■ Double transducer protector ■ 3L drain bag ■ Arterial latex-free injection side ■ Colour coded patient clamp ■ Post-dilution ■ Sterilisation by radiation
7037279	**A/V-Set HD Secura**	Bloodline system for double-needle treatment, suitable for HD Secura	■ Arterial pre-filter chamber ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ Sterilisation by radiation
7210645	**A/V-SN Set Dialog**	Bloodline system for single-needle valve treatment only, suitable for Dialog, Dialog Advanced, Dialog+	■ Arterial pre-filter chamber + PBE port ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ Sterilisation by radiation
7210717	**A/V-SN Set HD Secura**	Bloodline system for single-needle treatment, suitable for HD Secura	■ Arterial line with double pump ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ Sterilisation by radiation
7210611	**A/V-SN CO Set Dialog**	Bloodline system for double-needle treatment, suitable for Dialog, Dialog Advanced, Dialog+	■ Arterial pre-filter chamber + PBE port ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ Post-dilution ■ Sterilisation by radiation
7210698	**A/V-SN CO Set Dialog**	Bloodline system for single-needle cross-over treatment, suitable for Dialog, Dialog Advanced, Dialog+	■ Arterial pre-filter chamber + PBE port ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ One way spike ■ Infusion set ■ Recirculation connector ■ Post-dilution ■ Sterilisation by radiation
7210714	**A/V-SN CO Set Dialog**	Bloodline system for single-needle cross-over treatment, suitable for Dialog, Dialog Advanced, Dialog+	■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ One way spike ■ Post-dilution ■ Sterilisation by radiation

2. A/V Systems
Haemodialysis bloodline systems

A/V Systems for Dialysis machines

Art. No.	Product name	Short description	Features
A/V Systems for Dialysis machines of Fresenius Medical Care			
721061210	**A/V-Set 2008/4008**	Bloodline system for double-needle treatment, suitable for Fresenius 2008/4008	■ Arterial pre-filter chamber ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ Post-dilution ■ Sterilisation by radiation
7039611	**A/V-Set 2008/4008**	Bloodline system for double-needle treatment, suitable for Fresenius 2008/4008	■ Arterial pre-filter chamber ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ 30 mm drip chamber diameter ■ Post-dilution ■ Sterilisation by radiation
721061240	**A/V-SN Set 2008/4008**	Bloodline system for single-needle-treatment, suitable for Fresenius 2008/4008	■ Arterial pre-filter chamber ■ Arterial line with double pump ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ Post-dilution ■ Sterilisation by radiation
A/V Systems for Dialysis machines of Gambro			
721061200	**A/V-Set AK 100-200**	Bloodline system for double-needle haemodialysis treatment, suitable for Gambro AK 100-200	■ Arterial pre-filter chamber ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free injection side ■ Post-dilution ■ Sterilisation by radiation
721061230	**A/V-SN Set AK 100-200**	Bloodline system for single-needle treatment, suitable for Gambro AK 100-200	■ Big Arterial and Venous exp. Chambers ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free injection side ■ Post-dilution ■ Sterilisation by radiation
721061250	**A/V-HDF Set AK 100-200**	Bloodline system for double-needle treatment, suitable for HDF therapy on Gambro AK 100-200	■ Arterial pre-filter chamber ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ Post-dilution ■ Sterilisation by radiation
A/V Systems for Dialysis machines of Nikkiso			
721061260	**A/V-Set DBB 03-05**	Bloodline system for double-needle treatment, suitable for Nikkiso DBB 03-05	■ Arterial pre-filter chamber + PBE port ■ Arterial pre-pump chamber ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free injection side ■ Post-dilution ■ Sterilisation by radiation
721061270	**A/V-SN Set DBB 03-05**	Bloodline system for single-needle treatment, suitable for Nikkiso DBB 03-05	■ Arterial pre-filter chamber + PBE port ■ Arterial pre-pump chamber ■ Colour coded patient clamp ■ Arterial latex-free injection side ■ Sterilisation by radiation
A/V Systems for Dialysis machines of Baxter			
7039533	**A/V-Set Microclav**	Bloodline system for double-needle treatment, suitable for Baxter Microclav	■ Arterial pre-pump chamber ■ Arterial pre filter chamber ■ 2L drain bag ■ Arterial latex-free injection side ■ Post-dilution ■ Sterilisation by radiation
7210861	**A/V-Set Althin**	Bloodline system for double-needle treatment, suitable for Baxter Althin	■ Arterial pre-pump chamber ■ One-way spike ■ 3L drain bag ■ Arterial latex-free injection side ■ Post-dilution ■ Sterilisation by radiation
Universal A/V Systems			
7210807	**Universal A/V-Set**	Bloodline system compatible to Dialog, Dialog Advanced, Dialog$^+$, FMC 4008, Gambro AK, Baxter Microclav, Althin	■ One-way spike ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free injection side ■ Sterilisation by radiation
7210892	**Universal A/V-Set**	Bloodline system compatible to Dialog, Dialog Advanced, Dialog$^+$, FMC 4008, Gambro AK, Baxter Microclav, Althin	■ One-way spike ■ Colour coded patient clamp ■ 2L drain bag ■ Arterial latex-free asymmetrical injection side ■ Sterilisation by radiation

Accessories for A/V Systems

Art. No.	Product name	Short description	Features
7210834	**Substitution line**	Reinfusion line, suitable for Dialog, Dialog Advanced, Dialog+, used to transfer sterile fluids with appropriate composition from bag to patient; connection to bag through spikes or male luer	■ 3 one way spikes ■ 3 male luer locks ■ Sterilisation by radiation
7020250	**Substitution line**	Reinfusion line, suitable for Dialog, Dialog Advanced, Dialog+, used to transfer sterile fluids with appropriate composition from bag to patient; connection to bag through special Dialoc connectors	■ 2 Dialoc connectors ■ Sterilisation by EO
7020228	**Substitution line**	Reinfusion line, suitable for HD Secura, used to transfer sterile fluids with appropriate composition from bag to patient; connection to bag through male luer	■ 1 male luer connector ■ Sterilisation by EO
721055A	**HDF-online tubing set**	Reinfusion line, suitable for Dialog, Dialog Advanced, Dialog+, used to transfer treated dialysate fluid from machine to patient	■ 1 non-return valve ■ 1 male luer connector ■ Sterilisation by radiation
7020246	**Diafusine line**	Infusion line for transferring saline or drugs, from bag to patient; connection to bag through male luer	■ 2 male luer lock connectors ■ dripping chamber ■ roller clamp ■ Sterilisation by EO
7210670	**Removable transducer protector**	Transducer to be added to the line when necessary or used to replace of transducers wet by blood during the haemodialysis treatment	■ Sterilisation by EO
7210224	**Transducer protector**	Transducer to be added to the line when necessary or used to replace of transducers wet by blood during the haemodialysis treatment	■ Sterilisation by EO
7020457	**2 Litres drain bag**	Bag used to collect the priming fluid	■ Sterilisation by EO
7210559	**Pre-dilution adapter**	Adapter that, once connected to the arterial dialyser connector, allows pre-dilution therapy to be performed	■ Male/female dialyser connector ■ Sterilisation by EO
7210868	**Single-needle adapter**	Used to connect arterial and venous haemodialysis bloodlines to fistula needle, for single-needle haemodialysis	■ 2 Luer-Lock female connectors ■ 1 Luer-Lock male connector ■ Sterilisation by EO
7210833	**Recirculation connector**	Double female luer connector, used for priming fluid recirculation or, if necessary, for blood recirculation (limited period of time)	■ Sterilisation by radiation
7210728	**Extension line**	Arterial and Venous extension line	■ 2 Luer-Lock female connectors ■ 1 Luer-Lock male connector ■ Sterilisation by EO
7210151	**One way spike**	Spike used to pierce through the solution bag caps, in priming or restitution phase	■ Sterilisation by EO

3. The UltraPureFluid system (UPF) by B. Braun

Ultrapure fluid

Because of their illness, not only are dialysis patients exposed to greater risk factors, they are also exposed to nearly 20,000 liters of dialysis fluid every year – with only a semipermeable membrane separating their blood from the dialysis fluid. Fluid purity is crucial to treatment quality. Even minor bacterial impurities can lead to degradation products and toxins, such as endotoxins. Depending on their size, these toxins are capable of passing through dialysis membranes and triggering reactions in the patient's blood. It has been shown that these situations can lead to serious and costly complications.

B. Braun offers a closed system for manufacturing ultrapure dialysis fluid and infusion solutions for Online therapy that consists of the following components:

- Dialog Advanced/Dialog^{+} haemodialysis machine
- Diacap® Ultra dialysis fluid filter/Online filter
- Disinfection, cleaning + decalcification agent: Citric Acid 50%
- Option: disinfection + cleaning agent: Tiutol® KF

What does ultrapure dialysis fluid mean?

- Maximum reduction in microbiological impurities in the dialysis water
- Germ-free fluid (sterile according to Ph.Eur., only if sterility is monitored by batch)
- Endotoxin levels < 0.03 IU/ml

Clinical benefits

- Marked reduction in chronic inflammatory processes
- Lower rate of dialysis-induced amyloidosis
- Favorable in promoting patient's general nutritional state
- Reduction in oxidative stress
- Reduction in cardiovascular morbidity rates
- Great savings potential through preventive protection against complications and interrelated consequential costs

Benefits of the UltraPureFluid system (UPF)

- Significantly improves dialysis treatment quality
- Ultra-high microbiological system performance
- Easy handling
- Gentle, safe and reliable disinfection, decalcification and cleaning
- Automatic test routines maximise safety of overall system

What this means for chronic haemodialysis patients

- Significant improvement in patient's well-being
- Demonstrably longer life expectancy in long-term dialysis patients
- Delayed loss of residual renal function

4. Dialysis fluid filter and Online filter

4.1 Diacap® Ultra

Diacap® Ultra is a gamma-sterilised, hollow-fibre membrane filter made of high-grade Polysulfone fibre. It is intended for use as a bacterial and pyrogen filter for manufacturing ultrapure dialysis fluid in Dialog, Dialog Advanced and Dialog^{+} dialysis machines. The filter is a central component of B. Braun's "UltraPureFluid" system (UPF) and can also be used for the preparation of volume replacement solution for HF/HDF Online therapy with the Dialog machine.

- Shelf life: 36 months

Product benefits of Diacap® Ultra:

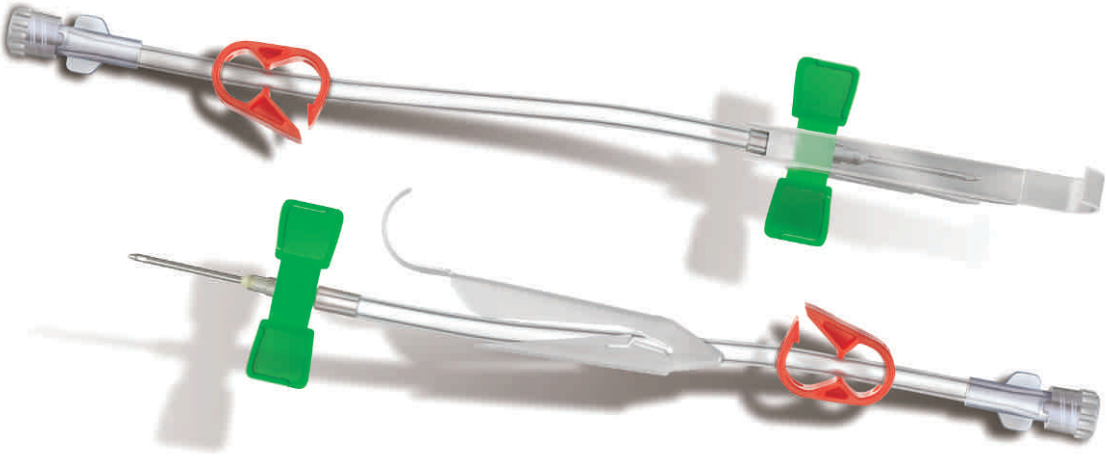
- Highly adsorptive Polysulfone membrane: bacteria and endotoxin retention rating > 10^6 IU/ml
- Above-average filter service life: 150 treatments or approx. 900 hours of operation
- High mechanical stability of Polysulfone fibres
- Simple and efficient preparation
- Long service life means high cost-effectiveness

Benefits of ultrapure dialysis fluid:

- Significantly improves dialysis treatment quality
- Markedly reduces chronic inflammatory processes
- Beneficial impact on dialysis patients' nutritional condition and quality of life
- Positive effect on residual renal function in patients recently dependent on dialysis

Art. No.	Product name	Packing unit
7107365	Diacap® Ultra DF-Online Filter AP	1 unit 6 units/box
7107366	Diacap® Ultra DF-Online Filter	1 unit 6 units/box

5. Fistula needles



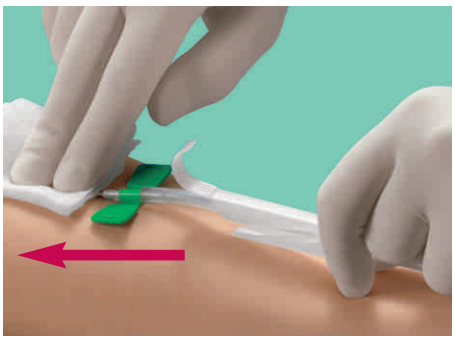
5.1 Diacan® S

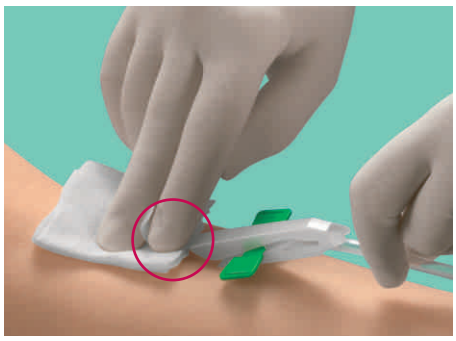
Needlestick injuries are among the most common occupational-related accidents in the healthcare sector. The actual hazard potential is not caused by the needlestick itself, but related to the risk of the injured patients contracting infections from blood-borne viruses, such as Hepatitis B, Hepatitis C or HIV contagions. The considerably higher rate of infection encountered among dialysis patients means that users in the dialysis sector are exposed to a significantly greater risk of infection.

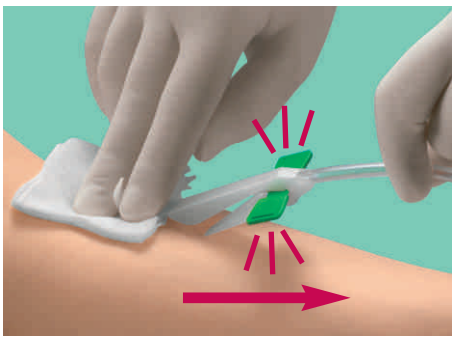
The use of safety needles can reduce this risk significantly. The Diacan® S safety needle from B. Braun offers extremely easy handling. When the needle is removed at the end of treatment, the integrated safety mechanism means that it no longer poses a risk to users. One distinctive feature is that the puncture handling procedure is the same as that of standard fistula needles. So, there's hardly any need to adapt routine workflows.

Product benefits of Diacan® S:

- Integrated safety device
- Easy-to-use
- Effective protection against needlestick injuries
- Reliable protection against infection risks
- Familiar quality and form; Diacan® S fistula needles are based on the proven Diacan® products







Diacan® S

Art. No. Arterial	Art. No. Venous	Wing colour	Diameter	Needle length (mm)	Tube length (mm)	Sterilisation ETO	Sterilisation Steam
7023166	7023176	■	15G (1.8 mm)	20	150		■
7023148	7023158	■	15G (1.8 mm)	20	300		■
7023160	7023170	■	15G (1.8 mm)	25	150		■
7023161	7023171	■	15G (1.8 mm)	25	300		■
7023166N		■	15G (1.8 mm)	25	300	■	
7023141	7023151	■	16G (1.6 mm)	15	150		■
7023144	7023154	■	16G (1.6 mm)	15	300		■
7023167	7023177	■	16G (1.6 mm)	20	150		■
7023146	7023156	■	16G (1.6 mm)	20	300		■
7023162	7023172	■	16G (1.6 mm)	25	150		■
7023163	7023173	■	16G (1.6 mm)	25	300		■
7023167N	7023177N	■	16G (1.6 mm)	25	300	■	
7023142	7023152	■	17G (1.5 mm)	15	150		■
7023145	7023155	■	17G (1.5 mm)	15	300		■
7023168	7023178	■	17G (1.5 mm)	20	150		■
7023147	7023157	■	17G (1.5 mm)	20	300		■
7023164	7023174	■	17G (1.5 mm)	25	150		■
7023165	7023175	■	17G (1.5 mm)	25	300		■
7023168N		■	17G (1.5 mm)	25	300	■	

Diacan® S comes equipped with ■ safety mechanism ■ rotating wings ■ tubing clamp ■ arterial needle with "backeye".
Packing unit: 50 pcs./box

Article numbers for Eastern Europe available on request.

■ Shelf life: 36 months

5.2 Diacan® and Singucan®

The individual components of the overall system required for HD therapy can only provide optimum performance if high-quality and safe venous access is achieved generally.

A good needle product is not only gentle to the tissue, it also provides constant high flow rates and minimises puncture site bleeding. As well as reliable handling during routine dialysis, these attributes play just as important a role as the patient's subjective feeling of virtually pain-free puncture.

B. Braun supplies fistula needles in arterial (A) and venous (V) versions called Diacan® and the single-needle version is trade-named Singucan®.

Benefits of Diacan® and Singucan®:

- Extremely thin-walled needle and optimally cut bevel for virtually painless puncture
- Special oval-shaped backeye on arterial needles for penetration that is gentle to tissue and has a lower rate of puncture canal bleeding
- Uniform thin silicone coating of the lumen improves flow behavior
- Pliant, colour coded rotating wings with rough gripping surface allow perfect and safe handling during routine dialysis
- Red and black orientational dots on needle holder
- Highly elastic tubing
- Functionally shaped featherweight tube clamps
- Red and blue coloured clamps
- Transparent Luer connection with oversized grip surface and optimised inner surface guarantees secure connection to bloodline and disconnection at the end of treatment

Diacan® A/V Set (arterial + venous fistula needles)

Art. No.	Wing colour	Diameter	Needle length (mm)	Tube length (mm)	Sterilisation ETO	Sterilisation Steam
Set: 7023085	■	15G (1.8 mm)	20	150		■
Set: 7023084	■	16G (1.6 mm)	15	150		■
Set: 7023080	■	16G (1.6 mm)	20	150		■
Set: 7023082	■	16G (1.6 mm)	25	150		■
Set: 7023083	■	17G (1.5 mm)	15	150		■
Set: 7023081	■	17G (1.5 mm)	20	150		■

Diacan® A (arterial fistula needles) and Diacan® V (venous fistula needles) come equipped with ■ rotating wings ■ tubing clamp ■ Diacan® A with backeye.
Packing unit: 25 sets/box

■ Shelf life: 36 months

Diacan® A (arterial fistula needles), Diacan® V (venous fistula needles)

Art. No. Diacan®A	Art. No. Diacan®V	Wing colour	Diameter	Needle length (mm)	Tube length (mm)	Sterilisation ETO	Sterilisation Steam
7025041N	7025148N		14G (2.0 mm)	20	150	■	
7023036	7023048	■	15G (1.8 mm)	20	150		■
7023030NROW	7023138NROW	■	15G (1.8 mm)	20	300	■	
7026030N	7026137N	■	15G (1.8 mm)	25	150	■	
7023029	7023042	■	15G (1.8 mm)	25	150		■
7026439NROW	7026536NROW	■	15G (1.8 mm)	25	300	■	
7023090	7023091	■	16G (1.6 mm)	15	150		■
7023035	7023047	■	16G (1.6 mm)	20	150		■
7023022NROW	7023122NROW	■	16G (1.6 mm)	20	300	■	
7026021N	7026129N	■	16G (1.6 mm)	25	150		■
7023028	7023041	■	16G (1.6 mm)	25	150		■
7026420NROW	7026528NROW	■	16G (1.6 mm)	25	300	■	
7023092	7023093	■	17G (1.5 mm)	15	150		■
7023034	7023046	■	17G (1.5 mm)	20	150		■
7023037	7023050	■	17G (1.5 mm)	20	300		■
7023027	7023040	■	17G (1.5 mm)	25	150		■
7023031	7023043	■	17G (1.5 mm)	25	300		■
7026617NROW	7026714NROW	■	17G (1.5 mm)	25	300	■	
7026412N	7026510N	■	18G (1.3 mm)	20	300	■	

Diacan® A (arterial fistula needles) and Diacan® V (venous fistula needles) come equipped with ■ rotating wings ■ tubing clamp ■ Diacan® A with backeye.
Packing unit: 50 pcs./box

■ Shelf life: 36 months

Singucan® fistula needles for single needle dialysis

Art. No.	Wing colour	Diameter	Needle length (mm)	Tube length (mm)	ETO sterilisation
7025211N	■	15G (1.8 mm)	20	150	■
7026218N	■	15G (1.8 mm)	25	150	■
7023101N	■	16G (1.6 mm)	20	150	■
7026234N	■	16G (1.6 mm)	25	150	■
7026226N	■	17G (1.5 mm)	20	150	■

Singucan® fistula needles for single dialysis come equipped with ■ fixation wing ■ tube clamp ■ backeye. Packing unit: 30 pcs./box

■ Shelf life: 36 months

6. Dialysis catheters

6.1 Haemocat® Signo

Haemocat® Signo is a temporary double-lumen haemodialysis catheter for insertion in the jugular, subclavian or femoral vein.

The outstanding added value offered by Haemocat® Signo is its speedy, economical and simple monitoring of catheter position through the atrial ECG lead during catheterisation. Verification of the catheter position is easy and unambiguous through the identification of the P-wave spike on the ECG. The fact that the doctor can check the catheter position directly in situ without any awkward repositioning of the patient also eliminates the need for X-ray control.

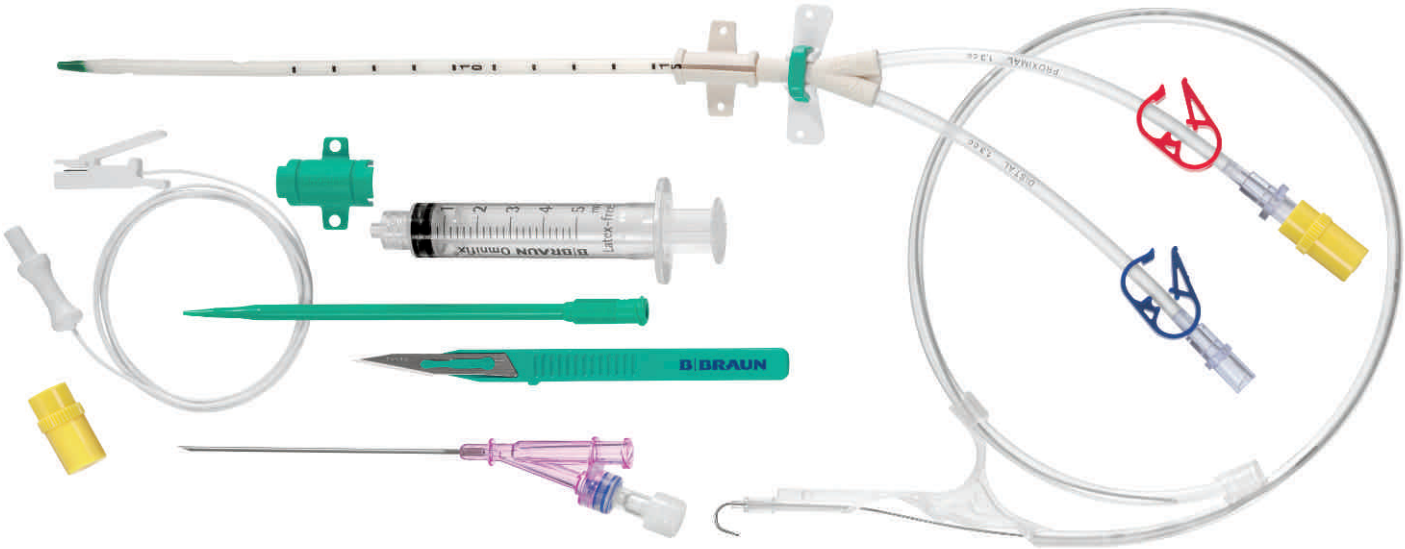
Benefits of Haemocat® Signo:

- Arterial ECG lead provides optimum safety and is patient friendly
- Positioning, control and correction are carried out all in one step – treatment can begin immediately
- No radiation exposure
- No re-catheterisation due to misplacement
- No late complications
- Low personnel and organisational outlay
- High cost-effectiveness
- Smooth catheter insertion even in extremely difficult anatomical situations thanks to:
  - kink-proof guide wire
  - superior tensile strength of guide wire
  - ideal ratio of flexibility and resilience

Temporary Double-Lumen Catheter Sets

Art. No.	Product name	Catheter Ø (mm)	(F)	Length (cm)	Lumen (G)	Guide wire ø (mm)	Length (cm)	Packing unit
	Catheter sets							
7029601	Haemocat® Signo V 1215	4	12	15	11/11	0.89	50	10 pcs./box
7029653	Haemocat® Signo V 1217	4	12	17	11/11	0.89	50	10 pcs./box
7029685	Haemocat® Signo V 1220	4	12	20	11/11	0.89	50	10 pcs./box
	Catheter accessories:							
4150228	Certodyn® Universal adapter							

- Shelf life: 60 months



User-friendly Catheter Sets

Set includes:

- Double-lumen catheter
- Valve cannula 18G (1.3 mm)
- Kink-proof guide wire
- Dilator 12 Fr
- Scalpel
- IN stopper
- Connecting cable for intra-atrial ECG lead
- Syringe: Omnifix® 5 ml

Name		Flow rate* (ml/min)	Priming volume (ml)
Haemocat® Signo V 1215	distal proximal	266 293	1.2 1.2
Haemocat® Signo V 1217	distal proximal	242 277	1.3 1.3
Haemocat® Signo V 1220	distal proximal	234 261	1.4 1.4

*In vitro specifications comply with ISO 10555
Information concerning available PD-Catheters on request.

7. Haemofiltration solutions

7.1 Duosol®, bicarbonate-buffered solution for haemofiltration

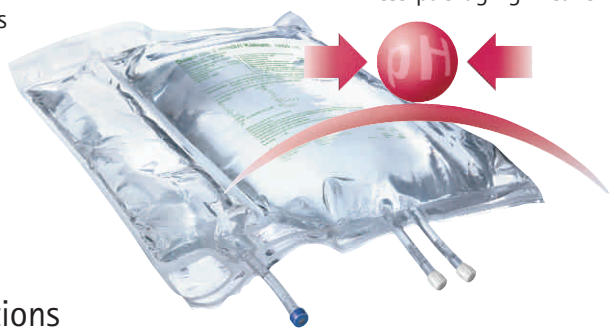
The Duosol® solution for haemofiltration is optimally adapted to the treatment of patients with acute renal failure.

- Physiological buffer
- Optimal correction of metabolic acidosis
- Directly available buffer
- Shelf life: 24 months

The double-chamber bag

The 5-litre double-chamber bag saves time and energy:

- Intelligent product design
- Non-PVC bag material
- Less packaging means less waste



Composition of unmixed solutions

Pharmaceutically active ingredients in g/l	Duosol® without potassium		Duosol® with 2 mmol/l potassium		Duosol® with 4 mmol/l potassium	
	Large chamber 4445 ml	Small chamber 555 ml	Large chamber 4445 ml	Small chamber 555 ml	Large chamber 4445 ml	Small chamber 555 ml
Sodium chloride	6.18	4.21	6.18	4.21	6.18	4.21
Potassium chloride	-	-	-	1.34	-	2.68
Calcium chloride dihydrate	-	1.98	-	1.98	-	1.98
Magnesium chloride hexahydrate	-	0.91	-	0.91	-	0.91
Glucose monohydrate	-	9.90	-	9.90	-	9.90
Sodium hydrogen carbonate	3.59	-	3.59	-	3.59	-
Other ingredients	Electrolyte solution (small chamber): hydrochloric acid 25% for adjusting pH, water for injection Bicarbonate solution (large chamber): carbon dioxide for adjusting pH, water for injection					

Composition of mixed solutions

Art. No.	Product name	Na^+ mmol/l	K^+ mmol/l	Ca^{++} mmol/l	Mg^{++} mmol/l	Cl^- mmol/l	HCO_3^- mmol/l	Glucose mmol/l	Theoretical osmolarity
1)	Duosol® without potassium	140	0	1.5	0.5	109	35	5.5	292
1)	Duosol® with 2 mmol/l potassium	140	2	1.5	0.5	111	35	5.5	296
1)	Duosol® with 4 mmol/l potassium	140	4	1.5	0.5	113	35	5.5	300

Art. No.	Product name	Packing unit	Units per pallet
1)	Duosol® without potassium	2 bags/box	100 bags
1)	Duosol® with 2 mmol/l potassium	2 bags/box	100 bags
1)	Duosol® with 4 mmol/l potassium	2 bags/box	100 bags

1) Country-specific marketing authorisation and product design. Further information on request.

8. Infusion and irrigation solutions

8.1 Isotonic sodium chloride solution in Perfuflac® N bag

Infusion and irrigation solutions that meet the demands for pre-treatment preparation and post-treatment of extracorporeal systems. This claim applies across the board, from intermediate infusions to interruptions in dialysis.

The Perfuflac® N bag is free of PVC and plasticizers. Instead, it is made of polyolefins, a group of plastics exclusively made up of hydrocarbon molecules. In Perfuflac® N, the polymers' spatial arrangement gives the bag its special elastic properties. No plasticizers are needed. For dialysis units – this means our products are more environmentally friendly and offer greater protection to users and patients against exposure to avoidable hazards.

- Isotonic sodium chloride solution (NaCl 0.9%), infusion and irrigation solution
- PVC-free bag models equipped with 2 Luer-Lock connectors in different volumes
- Well-established, top-grade product quality

Benefits of Perfuflac® N bag:

- 2 Luer-Lock ports
- PVC-free
- Applicable for infusion
- User-friendly connection tubing length
- Convenient handling
- Polyethylene outer bag
- Proven, top-level quality
- Developed and manufactured in the company's own production facilities in Germany
- Shelf life: 24 months

Isotonic sodium chloride solution in Perfuflac® N bag, supplied in a box

Art. No.	Product name	Packing unit	Units per pallet
1)	Isotonic sodium chloride solution in Perfuflac® N bag	10 x 250 ml	1170 bags
1)	Isotonic sodium chloride solution in Perfuflac® N bag	10 x 500 ml	780 bags
1)	Isotonic sodium chloride solution in Perfuflac® N bag	10 x 1000 ml	500 bags
1)	Isotonic sodium chloride solution in Perfuflac® N bag	6 x 1500 ml	300 bags
1)	Isotonic sodium chloride solution in Perfuflac® N bag	4 x 2000 ml	224 bags

1) Country-specific. Note: Articles with 2 Luer-Lock also available in PVC bags; further information on request.

9. Dialysis concentrates

Patient-optimised therapy

The vast range of liquid acidic and alkaline bicarbonate haemodialysis concentrates in various formulations offered by B. Braun allow the bicarbonate-buffered haemodialysis treatment to be optimally tailored to the individual needs of each patient. Sodium hydrogen carbonate powder supplied in cartridges and bags and prepackaged kits for the self-preparation of acidic haemodialysis concentrates complete the product range.

Acetate concentrates for acetate haemodialysis are also available on request.

Application-oriented container systems

Our container systems for concentrates, which include a wide range of canisters, self-preparation kits and cartridges, meet the complex demands of modern dialysis units. They are model examples of B. Braun's commitment to manufacturing ecologically friendly products:

- Cartridges instead of conventional canisters
- Self-preparation kits reduce logistics and eliminate the need to transport canisters around the unit

9.1 Acidic bicarbonate haemodialysis concentrates 1+34, 1+44

To manufacture the ready-to-use dialysis fluid, the acidic bicarbonate haemodialysis concentrates are mixed by the dialysis machine. The standard dilution ratio is 1+34 or 1+44. The concentrates are mixed with alkaline bicarbonate haemodialysis concentrate 8.4% and water of a suitable grade (water for haemodialysis).

			Packing unit
Sodium	135 - 140	mmol/l	Canisters: 6, 10 l
Potassium	0 - 4	mmol/l	
Calcium	0 - 1,75	mmol/l	
Magnesium	0.5 - 1	mmol/l	
Chloride	100 - 116	mmol/l	
Bicarbonate	32 - 36	mmol/l	
Acetate	2 - 3	mmol/l	
Glucose	0 - 2	g/l	

Acidic bicarbonate concentrates at a 1+44 mixing ratio

The Advantage:

- Lower concentrate volume required per treatment
- Less storage space
- Less need for replacement containers

Broad spectrum for individualised treatments

Packing unit	Canisters per pallet
6-l canisters	90
10-l canisters	60

- Shelf life: 36 months

Acidic concentrates (1+34)
Standard product range, additional packaging sizes and formulations on request

			Composition of the ready-to-use dialysis fluid: 1 litre acidic concentrate SW xxx A and 32.775 litre water for haemodialysis + 1.225 litre bicarbonate concentrate 8.4% yield a ready-to-use haemodialysis solution with the following electrolyte concentrations:								
			Potassium 0 mmol/l – 1 mmol/l								
Art. No. 6 l	Art. No. 10 l	Conc. name	Na^+ mmol/l	K^+ mmol/l	Ca^{++} mmol/l	Mg^{++} mmol/l	Cl^- mmol/l	$Acetate^-$ mmol/l	HCO_3^- mmol/l	Glc g/l	Osmol. mOsm/l
	124	SW 241 A	140	0	1.5	0.5	109	2.5	32.5	1	294
	117	SW 284 A	138	1	1	0.5	107	3	32	1	290
7775	7575	SW 375 A	138	1	1.25	0.5	107.5	3	32	1	290
7776	7576	SW 376 A	138	1	1.5	0.5	108	3	32	1	292
8473	3203	SW 163 A	138	1	1.75	0.5	108.5	3	32	1	293

Potassium 2 mmol/l											
Art. No. 6 l	Art. No. 10 l	Conc. name	Na^+ mmol/l	K^+ mmol/l	Ca^{++} mmol/l	Mg^{++} mmol/l	Cl^- mmol/l	$Acetate^-$ mmol/l	HCO_3^- mmol/l	Glc g/l	Osmol. mOsm/l
7299		SW 415 A	138	2	0	0.5	106	3	32	1	288
7777	136	SW 262 A	138	2	1	0.5	108	3	32	1	292
3251	3273	SW 196 A	138	2	1.25	0.5	108.5	3	32	0	287
7778	7578	SW 127 A	138	2	1.25	0.5	108.5	3	32	1	293
8475	335	SW 166 A	138	2	1.25	0.75	109	3	32	1	294
	349	SW 93 A	140	2	1.5	0.5	111	2	33	0	292
7780	7580	SW 380 A	138	2	1.5	0.5	109	3	32	1	294
7379	7597	SW 397 A	138	2	1.5	1	110	3	32	1	296
	147	SW 102 A	140	2	1.5	0.5	111	2	33	1	298
3424	223	SW 230 A	140	2	1.5	0.75	111.5	3	32	2	304
17	149	SW 95 A	138	2	1.75	0.5	109.5	3	32	0	289
7724	7524	SW 139 A	138	2	1.75	0.5	109.5	3	32	1	295

Potassium 3 mmol/l – 4 mmol/l											
Art. No. 6 l	Art. No. 10 l	Conc. name	Na^+ mmol/l	K^+ mmol/l	Ca^{++} mmol/l	Mg^{++} mmol/l	Cl^- mmol/l	$Acetate^-$ mmol/l	HCO_3^- mmol/l	Glc g/l	Osmol. mOsm/l
7782	116	SW 285 A	138	3	1.25	0.5	109.5	3	32	1	295
7435	3227	SW 184 A	138	3	1.25	0.75	110	3	32	1	296
7781	7581	SW 381 A	138	3	1.5	0.5	110	3	32	1	296
	253	SW 154 A	140	3	1.5	0.75	112.5	2.5	32.5	1	301
	226	SW 231 A	140	3	1.5	0.75	112.5	3	32	2	306
133	137	SW 178 A	138	3	1.75	0.5	110.5	3	32	1	297
7975	118	SW 286 A	138	4	1.25	0.5	110.5	3	32	1	297
7793	7593	SW 393 A	138	4	1.5	0.5	111	3	32	1	298
8481	131	SW 195 A	138	4	1.75	0.5	111	3	32	1	299

Acidic concentrates (1+44)
Standard product range, additional packaging sizes and formulations on request

			Composition of the ready-to-use dialysis fluid: 1 litre acidic concentrate SW xxx A and 42.245 litre water for haemodialysis + 1.755 litre bicarbonate concentrate 8.4% yield a ready-to-use haemodialysis solution with the following electrolyte concentrations:								
Potassium 0 mmol/l – 1 mmol/l											
Art. No. 6 l	**Art. No. 10 l**	**Conc. name**	**Na^+ mmol/l**	**K^+ mmol/l**	**Ca^{++} mmol/l**	**Mg^{++} mmol/l**	**Cl^- mmol/l**	**$Acetate^-$ mmol/l**	**HCO_3^- mmol/l**	**Glc g/l**	**Osmol. mOsm/l**
	7530	SW 443 A	139	0	1.5	0.5	104	3	36	1	292
7971		SW 441 A	139	1	1.25	0.5	104	3	36	1	293
	7532	SW 444 A	139	1	1.5	0.5	105	3	36	1	294
	7969	SW 418 A	139	1	1.75	0.5	114	3	36	1	294
Potassium 2 mmol/l											
Art. No. 6 l	**Art. No. 10 l**	**Conc. name**	**Na^+ mmol/l**	**K^+ mmol/l**	**Ca^{++} mmol/l**	**Mg^{++} mmol/l**	**Cl^- mmol/l**	**$Acetate^-$ mmol/l**	**HCO_3^- mmol/l**	**Glc g/l**	**Osmol. mOsm/l**
6809		SW 435 A	139	2	1	0.5	105	3	36	1	294
7715		SW 442 A	139	2	1.25	0.5	105.5	3	36	0	289
7733	7534	SW 445 A	139	2	1.25	0.5	105.5	3	36	1	295
6807	7936	SW 417 A	139	2	1.25	0.75	106	3	36	1	296
7725	7535	SW 446 A	139	2	1.5	0.5	106	3	36	1	296
6805	7985	SW 423 A	139	2	1.5	0.75	106.5	3	36	1	297
	3343	SW 247 A	139	2	1.5	0.75	106.5	3	36	1.5	300
7729	7537	SW 219 A	139	2	1.75	0.5	106.5	3	36	1	297
6806	7988	SW 425 A	139	2	1.75	0.75	107	3	36	1	298
Potassium 3 mmol/l – 4 mmol/l											
Art. No. 6 l	**Art. No. 10 l**	**Conc. name**	**Na^+ mmol/l**	**K^+ mmol/l**	**Ca^{++} mmol/l**	**Mg^{++} mmol/l**	**Cl^- mmol/l**	**$Acetate^-$ mmol/l**	**HCO_3^- mmol/l**	**Glc g/l**	**Osmol. mOsm/l**
7734	7538	SW 448 A	139	3	1.25	0.5	106.5	3	36	1	297
7974	254	SW 275 A	142	3	1.25	0.75	110	3	36	1	304
7726	7541	SW 449 A	139	3	1.5	0.5	107	3	36	1	298
6827	3342	SW 248 A	139	3	1.5	0.75	107.5	3	36	1.5	302
	7542	SW 450 A	139	3	1.75	0.5	107.5	3	36	1	299
7732	368	SW 436 A	139	4	1.25	0.5	107.5	3	36	1	299
7727	7543	SW 451 A	139	4	1.5	0.5	108	3	36	1	300
6808	6828	SW 434 A	139	4	1.5	0.75	108.5	3	36	1	301
7796	7548	SW 439 A	139	4	1.75	0.5	108.5	3	36	1	301

9.2 Renosol set
Modular product set for the self-preparation of acidic concentrates (1+34) in the central concentrate supply

- Components dissolve more quickly and conveniently because the electrolytes are present in dissolved form from the outset
- Quality complies with the European Pharmacopoeia
- System-inherent safety: fewer large-volume components, which means that nothing can be forgotten during concentrate manufacturing.
- Easy-to-use: the electrolytes are dissolved in a homogenous concentrate
- Shelf life: Renosol set = 24 months, Renosol-El = 36 months
- 60 % volume-saving compare to storage of 1+34 concentrates
- Renosol-El: 1 canister with liquid electrolyte concentrate (approx. 10 kg)
- Renosol-NaCl: 2 bags with sodium chloride, each in a box (approx. 10.7 kg/bag)

- Renosol-Glc: 0, 1 or 2 bags with glucose, depending on the formulation ordered (approx. 3.8 kg/bag (1 g Glc./l))

For haemodialysis, the components of the Renosol sets must be dissolved in water using a suitable mixing system. The Renosol set components are not suitable for direct use in dialysis machines. Please observe the instructions for use.

One set produces 100 l acidic bicarbonate haemodialysis concentrate, 1+34.

		Composition of the ready-to-use dialysis fluid: 1 litre acidic concentrate made of Renosol set and 32.775 litre water for haemodialysis + 1.225 litre bicarbonate concentrate 8.4 % yield a ready-to-use haemodialysis solution with the following electrolyte concentrations:								Litres of acidic concentrate (1+34)	Presentation: number of Renosol sets per pallet
Art. No.	Type	Na^+ mmol/l	K^+ mmol/l	Ca^{++} mmol/l	Mg^{++} mmol/l	Cl^- mmol/l	HCO_3^- mmol/l	$Acetat^-$ mmol/l	Glucose g/l		
5243	Renosol 10	140	2	1.25	0.75	111	32	3	0	100 L	18
5255	Renosol 14	140	2	1.25	0.75	111	32	3	1	100 L	18
5258	Renosol 16	140	2	1.5	0.5	111	32	3	1	100 L	18
5249	Renosol 11	140	2	1.5	0.75	111.5	32	3	0	100 L	18
5256	Renosol 15	140	2	1.5	0.75	111.5	32	3	1	100 L	18
5241	Renosol 04	140	2	1.75	0.75	112	32	3	0	100 L	18
5246	Renosol 09	140	2	1.75	0.75	112	32	3	1	100 L	18
5247	Renosol 05	140	2	1.75	0.75	112	32	3	2	100 L	18
5259	Renosol 17	140	3	1.5	0.5	112	32	3	1	100 L	18
5261	Renosol 18	140	4	1.5	0.5	113	32	3	1	100 L	18

Additional formulations available on request.

9.3 Alkaline bicarbonate haemodialysis concentrate 8.4 %, liquid in canisters

- Many years of experience in manufacturing and logistics
- Proven containers for safe and hygienic error-free use
- Closed filling system
- Sterile filtration before filling
- Batch-specific end controls
- Shelf life: 12 months

Art. No.	Product name	Packing unit	Canisters per pallet
217	Alkaline bicarbonate haemodialysis concentrate 8.4%	6 l canisters	90
259	Alkaline bicarbonate haemodialysis concentrate 8.4%	8 l canisters	60
169	Alkaline bicarbonate haemodialysis concentrate 8.4%	10 l canisters	60

9.4 Sodium hydrogen carbonate powder for haemodialysis, supplied in bags

- Easy-to-use logistics and concentrate manufacturing
- Optimum safety during transport and use
- Environmentally friendly
- High product quality
- IPC-controls, end controls
- Shelf life: 36 months

For manufacturing alkaline bicarbonate haemodialysis concentrates for extracorporeal bicarbonate haemodialysis or bicarbonate haemodiafiltration. Alkaline bicarbonate haemodialysis concentrate may only be used in combination with an acidic bicarbonate haemodialysis concentrate diluted as prescribed.

- Sodium hydrogen carbonate powder complies with the European Pharmacopoeia monograph
- Can be used in all conventional mixers for central supply systems
- 8.4 kg for 100 L concentrate (8.4%);
  1000 ml of this concentrate contain:
  84.0 g sodium hydrogen carbonate,
  equivalent to Na^+ 1000 mmol and HCO_3^- 1000 mmol

Art. No.	Product name	Packing unit	Units per pallet
470	Sodium hydrogen carbonate	3 x 8.4 kg/box	90

9.5 Sol-Cart B®

The Sol-Cart B® cartridge with sodium hydrogen carbonate powder is a practical alternative to liquid bicarbonate 8.4%.

Sodium hydrogen carbonate for haemodialysis, supplied in cartridges

- Cartridge housing of polypropylene
- One filter at the cartridge inlet and outlet port respectively
- Contents per cartridge: 650 g, 760 g or 1100 g, equiv. to 6.5 l, 7.6 l or 11.0 l bicarbonate concentrate 8.4% dialysis time for 6 h, 7 h or 9 h at a dialysate flow rate of 500 ml/min
- Sodium hydrogen carbonate powder complies with the European Pharmacopoeia monograph
- Can be used in all conventional dialysis machines with appropriate cartridge holders
- Shelf life: 36 months

Sol-Cart B® in boxes

Art. No.	Product name	Packing unit	Units per pallet
496	Sol-Cart B® 650 g	10 x 650 g	630
494	Sol-Cart B® 760 g	10 x 760 g	630
508	Sol-Cart B® 1100 g	8 x 1100 g	432

10. Disinfection

10.1 Citric Acid 50 %

Citric Acid 50 % is a liquid concentrate for the highly efficient citro-thermal disinfection, cleaning and decalcification of haemodialysis machines. The concentrate is used at 83°C in accordance with the machine manufacturer's instructions.

Unlike disinfecting agents that have strongly oxidising or aggressive acidic properties, Citric Acid 50 % with its high-powered disinfectant properties is very material compatible, user friendly and environmentally neutral.

Art. No.	Product name	Packing unit	Canisters per pallet
899	Citric Acid 50 %	6-litre canisters	90
307	Citric Acid 50 %	10-litre canisters	60

- Shelf life: 36 months

Benefits of Citric Acid 50 %

- Outstanding disinfectant and virucidal properties; bactericidal, fungicidal, tuberculocidal and virus-inactivating (including Parvovirus, HBV, HCV, HIV)
- The active ingredient is listed by the DGHM (German Society for Hygiene and Microbiology)
- Economical, since only low concentrations and quantities are needed
- Gentle on materials and highly effective at the same time
- Each application takes very little time
- No hazardous materials
- Safe to use and environmentally neutral

10.2 Tiutol® KF

Tiutol® KF is a fluid concentrate for highly efficient chemothermal disinfection and cleaning, based on sodium hypochlorite. Tiutol® KF has a proven bactericidal, tuberculocidal, fungicidal and virus-inactivating action. Prerequisite for use in haemodialysis machines are defined operating conditions. In combination with the Dialog dialysis machine with DF filter or Dialog Online, the use of Tiutol® KF is optional, according to instructions for use and labelling.

Art. No.	Product name	Packing unit	Canisters per pallet
7120222	Tiutol® KF	5-litre canisters	128

- Shelf life: 36 months

Benefits of Tiutol® KF:

- Excellent cleaning power, particularly against biofilms
- Very good disinfectant and virucidal properties; bactericidal, fungicidal, tuberculocidal and virus-inactivating (including HBV, HCV, HIV)

Complete product range for dialysis

B. Braun has developed, produced and marketed disinfection and hygiene products for many years. These products are manufactured to the highest international standards and are sold worldwide.

Further disinfectant and hygiene products are available on request for:

- Hand hygiene
- Skin disinfection
- Surface disinfection
- Manual processing of instruments

11. Adapters

11.1 Duosol® Adapter

Adapter: male Luer-Lock (1) to Dialoc®/Safe Lock® Luer (1).

Designed to connect conventional tubing to Dialoc®/ Safe Lock® male Luer Lock ports with female Luer-Lock connectors on Duosol® haemofiltration solution bags.

Art. No.	Product name	Packing unit
602060	Duosol® adapter	1 pcs.

■ Shelf life: 60 months

11.2 SH-BIC Adapter

Adapter: Dialoc® male (1) to Luer-Lock female (1).

Designed to connect conventional tubing to Luer-lock male ports with female Dialoc® connector on SH-BIC haemofiltration solution bags.

Art. No.	Product name	Packing unit
523	SH-BIC adapter	1 pcs.

■ Shelf life: 60 months

Product Description

Duosol® without Potassium solution for haemofiltration
Duosol® with 2 mmol/l Potassium solution for haemofiltration
Duosol® with 4 mmol/l Potassium solution for haemofiltration

Composition
Please see page 21

Indications
The ready-to-use solution is indicated for the treatment by continuous haemofiltration of intensive care unit patients with acute renal failure of any origin.

Contraindications
Ready-to-use solution-dependent contra-indications:
- Hypokalaemia (Duosol® without potassium, Duosol® with 2 mmol/l potassium)
- Hyperkalaemia (Duosol® with 4 mmol/l potassium)
- Metabolic alkalosis

Haemofiltration-dependent contra-indications:
- Acute renal failure with marked metabolic processes (hypercatabolism), if the uraemic symptoms cannot be corrected any longer by haemofiltration
- Inadequate blood flow from the vascular access

All states with elevated haemorrhage risk on account of systemic anticoagulation.

Use during pregnancy:
There are no current reports of clinical experience. The bicarbonate-buffered solution for hemofiltration may only be administered after consideration of the potential risks and benefits for mother and child.

Use during lactation:
No special restrictions.

Undesirable effects
Side effects can result from the treatment or the solution for haemofiltration used. Bicarbonate-buffered haemofiltration solutions are generally well tolerated. There have been no reports of adverse events or side effects, that might possibly be associated with the bicarbonate-buffered solution for haemofiltration.
However, the following side effects are conceivable:
Hyper- or hypohydration, electrolyte disturbances (e.g. hypokalaemia with Duosol® without potassium and Duosol® with 2 mmol/l potassium; hyperkalaemia with Duosol® with 4 mmol/l potassium), hypophosphataemia, hyperglycaemia and metabolic alkalosis.
The following side effects may occur during treatment nausea, vomiting, muscle cramps and hypotension.

Marketing authorisation holder:
B. Braun Avitum AG
Schwarzenberger Weg 73-79
34212 Melsungen
Germany

Isotonic sodium chloride solution

Composition
Active substances:
1000 ml contain:

Sodium chloride	9.0 g

Other ingredients
Water for injections
Electrolytes:

Na^+	154 mmol/l
Cl^-	154 mmol/l
theoretical osmolarity	308 mOsm/l
pH-value	4.5-6.5

Indications
Solution for infusion is indicated for:

- Short-term intravascular volume substitution
- isotonic dehydration or hypotonic dehydration
- irrigation solution
- Vehicle solution for compatible electrolyte concentrates and drugs
- Externally for wound irrigation and for moistening of wound tamponades and dressings

Contraindications
Isotonic Sodium Chloride solution is contraindicated for patients in states of hyperhydration.

Special warnings and precautions for use
- Isotonic sodium chloride solution should only be administered with caution in cases of: hypernatraemia, hyperchloraemia, hypokalaemia and disorders where restriction of sodium intake is indicated, such as cardiac insufficiency, generalized oedema, pulmonary oedema, hypertension, eclampsia, severe renal insufficiency.
- High infusion rates should be avoided in cases of hypertonic dehydration because of possible increases of plasma osmolarity and plasma sodium concentration.
- Clinical monitoring should include serum electrolytes and fluid balance.

Use during pregnancy and lactation
There are no restrictions for use during pregnancy and lactation.

Undesirable effects
Hypernatraemia or hyperchloraemia may occur during treatment.

Marketing authorisation holder:
B. Braun Avitum AG
Schwarzenberger Weg 73-79
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Notes

B BRAUN
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